

**METHOD AND APPARATUS FOR CREATING AND  
MANAGING GROUPS FOR INCREASING BUYING POWER  
ON THE WORLD WIDE WEB**

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**BACKGROUND OF THE INVENTION**

The instant application is a conversion application of provisional application number 60/119,220, filed on February 8, 1999, entitled METHOD AND APPARATUS FOR CREATING AND MANAGING GROUPS FOR INCREASING BUYING POWER ON THE WORLD WIDE WEB, listing as inventors Amir ALON and Ilan JUDKIEWICZ.

## 10 1. Field of Invention

This invention is concerned with a method and apparatus for creating and managing consumer buying groups on electronic networks such as the Internet.

## 2. Description of Prior Art and Benefits of the Invention

Lawrence Lockwood, US Patent No. 5,576,951, describes an in-store automated sales and service system. In this system, the software generates a personalized sale presentation based on historical user data. Many such systems already exist on electronic networks such as the World Wide Web. See [www.dell.com](http://www.dell.com) or [www.amazon.com](http://www.amazon.com) for further examples. Many sales organizations today operate two separate sales channels for direct sales and support, respectively. For example, a sales organization may have a call center, such as a telephone call center that allows a customer to call in and speak with a sales person, that coexists with, but is not integrated into, a web site on which the customer can automatically and interactively choose a product and configure his purchase.

Figure 1 describes a typical process in which a consumer searches for a product and looks for competitive deals between a variety of vendors. A consumer first chooses a product category, *e.g.*, VCRs (Step 101). The consumer next uses an on-line product

comparison service to identify a set of product features of interest to the consumer and the relative importance of each feature (Step 103). Either formally or informally, the consumer arrives at either a single product of interest (e.g., Sony VCR Model No. 1460) and/or a list of product parameters important to the consumer. The consumer then  
5 searches for current retail prices for the specific product of interest or for products satisfying the product parameter list (Step 105). The consumer's search will eventually lead to a choice of whether he/she should purchase a product or not (Step 107). If the consumer decides to purchase the product (Step 107), then the consumer will buy the product from the selected merchant vendor (Step 109). Otherwise, the consumer will  
10 choose not to make a purchase (Step 111).

Another popular shopping process comprises using an online auction system, such as uBid.com or eBay.com. In such systems, the seller provides a limited quantity of certain items to be sold to the highest bidder.

In addition, US Patent No. 5,794,207 to Walker et al. describes a method and apparatus for effectuating bilateral buyer-driven commerce. In Walker's invention, the prospective buyers of goods and services communicate purchase offers globally to potential sellers, allowing sellers to search conveniently for relevant buyer purchase offers, and for sellers potentially to bind a buyer to a contract based on the buyer's purchase offer.  
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It is well known that when a buyer makes a purchase in a large quantity he can typically receive a better price than a purchase in a small quantity. What is missing in the prior art is a method and apparatus to bring together many individual buyers to form a group so that they may together seek the best deal from the sellers.  
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It would therefore be desirable to provide a method and an apparatus for creating  
25 and maintaining groups of buyers.

It would further be desirable to provide a mechanism and tools for the interaction of a buying group and various sellers.

## SUMMARY OF THE INVENTION

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Embodiments of the invention provide a method for using a computer to facilitate a sales transaction for the purchase of a product/service by a group of buyers from one or more sellers. The computer receives requests to purchase the product/service from buyers in the group. A collective request can be formed for purchasing the product/service using the received buyer requests. The collective request is sent to the seller who may in return send a suggested price quotation for the product/service. An agent entity is notified about the received suggested price whereupon buyers may decide to authorize the purchase of the product/service at the seller's suggested price quotation. The agent entity may be a buyer or the group itself, for example.

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Embodiments of the invention also provide a method for using a computer to facilitate a sales transaction for the purchase of a product/service from one or more sellers. A seller may provide an agreed price for the product/service and/or a price reduction for the product/service on the basis of a group size. The computer may then receive requests to purchase the product/service by buyers, the buyers collectively forming a group. Monitoring of the group's size determines when/if the group has attained the size associated with the seller's agreed price or price reduction. If the appropriate group size is reached, then payment information may be provided to the seller.

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Embodiments of the invention further provide a computer-readable data transmission medium containing a data structure that facilitates a sales transaction with a seller. The data transmission(s) sent to the seller may comprise a first portion that

specifies a product/service for purchase by a group of buyers; a second portion that specifies a collective request by the group to purchase the product/service; a third portion that requests price information for the product/service from the seller; a fourth portion that specifies a time interval for which the collective request will remain active, and a  
5 fifth portion that specifies at least a minimum sales quantity for the product/service for which price information is requested.

Embodiments of the invention still further provide a computer-readable data transmission medium containing a data structure that facilitates a sales transaction with a buyer. The data transmission(s) sent to the buyer may comprise: a first portion that  
10 specifies a product/service for which purchase has been requested by the buyer; a second portion that identifies a group into which the buyer's purchase request has been joined with other purchase requests for the same product/service; a third portion that identifies a price quotation for the product/service received from a seller; and a fourth portion that asks the buyer if the buyer will commit to purchasing the product/service at the identified  
15 price quotation from the seller.

Embodiments of the invention additionally provide a computer-readable medium having computer-executable instructions for using a computer to facilitate a sales transaction for the purchase of a product/service by a group of buyers from at least one seller. The computer receives requests to purchase the product/service by buyers in the  
20 group. The computer forms a collective request for purchasing the product/service based upon the received buyer requests. The computer sends the collective request to the seller who may respond with a suggested price quotation for the product/service. The computer notifies an agent entity of the received suggested price quotation and may receive authorization from buyers for the purchase of the product/service at the seller's suggested  
25 price quotation.

Embodiments of the invention also provide a computer-readable medium having computer-executable instructions for using a computer to facilitate a sales transaction for the purchase of a product/service from at least one seller. A seller may provide an agreed price for the product/service and/or a price reduction for the product/service on the basis  
5 of a particular group size. The computer may then receive requests to purchase the product/service by buyers, the buyers collectively forming a group. The computer may monitor the group's size to determine if the group has attained the size associated with the seller's agreed price or price reduction. If the computer detects that the appropriate group size has been reached, then payment information may be provided to the seller.

10 Embodiments of the invention also provide a system for facilitating a sales transaction for the purchase of a product/service by a group of buyers from at least one seller. A purchase request receiver receives a request to purchase the product/service by buyers in the group. A collective request former builds a collective request for the purchase of the product/service based upon the received purchase requests. A transmitter  
15 sends the collective request to at least one seller. A price quotation receiver receives suggested price quotations for the product/service from sellers. A price quotation notifier notifies an agent entity of the received suggested price quotations. The agent entity may be a buyer in the group or the group, for example.

10 Embodiments of the invention additionally provide a system for facilitating a sales transaction for the purchase of a product/service from at least one seller. A memory retains an agreed price for the product/service from at least one seller or a price reduction for the product/service for a particular group size from the seller. A purchase request receiver receives requests to purchase the product/service by buyers, the buyers collectively forming a group. A group monitor monitors the group to determine when/if  
25 the group attains the group size associated with the seller. A payment provider provides

payment information to the seller if the group monitor indicates that the group has attained the appropriate group size.

#### BRIEF DESCRIPTION OF THE DRAWINGS

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FIG. 1 illustrates a prior art searching procedure used by a consumer to search for and purchase a product of interest.

FIG. 2 illustrates high-level steps occurring in the formation of a group, according to an embodiment of the invention.

10 FIG. 3 illustrates an exemplary communications process occurring when a group is formed, according to an embodiment of the invention.

FIG. 4 provides an overview of the process by which customer commitment may be acquired, according to an embodiment of the invention.

15 FIG. 5 provides a detailed example of the processes handled by the system controller, according to an embodiment of the invention.

#### DETAILED DESCRIPTION OF AN ILLUSTRATED EMBODIMENT OF THE INVENTION

20 Embodiments of the invention provide a method and an apparatus for effectuating the creation, lifetime management, and eventual dissolution of groups that pursue, or intend to pursue, the purchase of products and services. Embodiments of the invention allow prospective buyers of goods and services to communicate their desire to create such groups, to set-up the groups, and to specify the groups' objectives, agenda, and  
25 timing parameters. Embodiments of the invention further facilitate the escalation and final commitment of group members to a purchase order for one or more products/services by their group.

Embodiments of the invention support the interactive negotiation with a vendor or multiple vendors by the apparatus or group members, during which process both the group commitment escalates and the vendor's bid for the group's purchase improves.

Embodiments of the invention also support the notification of both a group of

5 sellers and a group of buyers regarding the group's bid/commit status.

Embodiments of the invention further support the secured, regulated transmission of an aggregate transaction information package, including information about multiple credit cards, multiple methods of payment and multiple billing and shipping addresses from a single source to a vendor.

10 Embodiments of the invention may also support the assignment of roles to participants of the group.

These and other objects of the invention may be achieved by providing, for example, a software package and Web services that collectively accomplish for an exemplary group purchase:

- 15 • Creating groups of buyers,
- Adding new members to an existing group,
- Notifying buyers of pre-negotiated deals for group purchase,
- Notifying various vendors about the group and collecting vendor bids,
- Notifying buyers of existing vendor bids,
- 20 • Receiving buyer commitments to buy,
- Closing the deal with the vendor(s),
- Collecting member payment data, and
- Delivering payment data to the selected vendor(s).

Figures 2-5 of the drawings illustrate preferred embodiments of a method and system for implementing the invention. Of course, an ordinarily skilled artisan will recognize alternative methods of accomplishing the invention described herein.

Figure 2 illustrates the process by which a group may be formed and how a buyer

- 5 may join the group, according to an embodiment of the invention. The buyer can select private or public groups (Step 201). Private groups may be controlled via password and ID, for example. A company Intranet, for example, can provide private groups for its employees. Once the buyer has located and entered the web page for group information, he can browse or search (step 207) existing groups to see if any existing groups have
- 10 been formed for purchasing the same product in which he is interested. The browser-supported search (step 207) may, for example, be undertaken by "product category," "geography," and/or "vendor," as well as other group parameters, such as its size and formation date.

The buyer can also search a database of pre-negotiated group deals (step 203).

- 15 Typically, such deals will provide the price or discount amount that various vendors are willing to accept for specific products or product lines for certain group sizes. Sony, for example, may be willing to provide 10% discount on all products for groups exceeding 100 buyers.

If a group is found (step 209), the buyer can join the group by providing his

- 20 information (step 211). If a group does not exist (step 209), the buyer can create the group by specifying the product that he is seeking (step 213). Of course, the buyer may simply create the group without first conducting a search (step 205).

Figure 3 illustrates exemplary procedures associated with creating a group and related communications, according to an embodiment of the invention.

Forming the group may include the steps of specifying price targets or ranges (step 301) and specifying deadlines for joining the group and/or receiving purchase commitments from members; deadlines for receiving vendor offers, and/or deadlines for closing the deal (step 303). Once a new group is formed, relevant vendors may be 5 notified (step 305), as well as friends or other potential buyers (step 307) as part of concluding the group set-up procedure (step 309).

The notification processes associated with embodiments of the invention, such as steps 305 and 307 above, can be carried out in a variety of ways, including but not limited to e-mail messages, Internet immediate messaging, voice messaging, beeper 10 messaging, and facsimile transmission. Also, the vendors and group members can log into the web site at any time and review the current status.

Figures 4 and 5 illustrate the communication and decision processes by which the price negotiation between the group and the vendor(s)/seller(s) is conducted, according to an embodiment of the invention. In Figure 4, the vendor(s) can either search for active 15 groups of interest (step 401) or receive automatic notification each time a relevant group is formed (step 403). The vendor(s) can submit a bid at any time (step 405). Bids which are submitted before the formation of the group can specify pre-negotiated prices and discounts if the group attains a certain size. Group members are notified of the best bids (step 407) and may use such information in making individual commitment decisions 20 (step 413).

Vendors may review bids submitted by other vendors and/or review the status of their own bid position (step 411). Of course, other vendors may also receive notification regarding bids submitted by other vendors (step 409). An iterative process may ensue in which subsequent bids from various vendors result in lower bid prices, as indicated by 25 the arrows shown between steps 405 and 411. Moreover, as vendors' bid positions become more favorable to the group, more and more individual group members may

commit to the group purchase, as indicated by the arrows between steps 411 and 413.

Figure 5 illustrates in further detail interactions between vendors and group members and how such interactions may be controlled, according to an embodiment of the invention. Communication messages between vendors 501-507 and group members

5 513-519 may be relayed through a central system controller 509 that runs the software and provides the communication medium between the vendors 501-507 and the group members 513-519. This process can be monitored automatically or manually. A system clock 511, for example, can be used to check for deadlines. As a skilled artisan will recognize, the central system controller 509 may comprise a computer, such as a personal

10 computer, and/or a dedicated hardware device.

The communication between the vendors 501-507 and the members 513-519 may include the current status of the groups, such as the total number of members, the number of committed members, the current bid, etc. Communications from the vendors 501-507 may include new bids. Communications from the members 513-519 may include 15 commitments to buy at the current bid or at a certain price point, as well as messages withdrawing from the group message.

A group may be designed to have a minimum mass group commitment requirement, such as a requirement that a single member express a desire to purchase a product/service (step 523). Member commitment may be gauged in a variety ways (step

20 521). For example, a group member may submit a "limit order" indicating commitment at a particular price and/or a group member may submit a "market" order indicating commitment to a purchase at the market price. As members commit to the group purchase, their purchase information, such as credit card numbers, may be collected (step 527). The system controller 509 may include functionality for collecting and retaining 25 the payment information. In addition, as discussed above, the payment information may be collected in a secure manner to prevent unauthorized use of such information.

As previously discussed, an iterative negotiation process typically facilitates the determination of the price for the product/service desired by the group and its members. The negotiation process may comprise one or more negotiation rounds between the vendors 501-507 and the group members 513-519 (step 525). The system controller 509  
5 may include functionality configured to support the negotiation process, as indicated by the arrows between the vendors 501-507 and the system controller 509 and the group members 513-519 and the system controller 509.

Once at least one group member 513-519 and one vendor 501-507 have met at an agreed upon a bid, the deal may be closed (step 529). Again, the system controller 509  
10 may include functionality configured to support the closing process. The deal closing typically comprises collecting and transferring payment information to the vendor who then processes the purchase orders (step 531). The payment information, preferably by credit card number, can be collected from the buyer at various times as discussed above, including sign-in time and just prior to closing. A check to make sure that the funds are available can be made before submitting the payment or payment information.  
15 Alternatively, the payment or payment information can be collected from the individual members and one payment can be forwarded to the vendor.

Once the deal is closed, the group may dissolve, or alternatively, some of the members may continue to try for an even better price.

20 It is apparent that a wide range of different working modes can be formed based on the invention without deviating from the its spirit and scope. Accordingly, this invention is not restricted by the specific embodiments disclosed herein. One skilled in the art may easily recognize numerous alternate approaches. For example, a skilled artisan will also recognize that the invention has been discussed in terms of both  
25 computer programs and systems utilizing hardware that perform similar functions, such as integrated circuits.

An ordinary artisan should require no additional explanation in developing the methods and systems described herein but may nevertheless find some possibly helpful guidance in the preparation of these methods and systems by examining standard reference works in the relevant art.

- 5 In general, in the following claims, the terms used should not be construed to limit the invention to the specific embodiments disclosed in the specification and the claims, but should be construed to include all such systems that operate under the claims set forth hereinbelow. Accordingly, the invention is not limited by the disclosure, but instead its scope is to be determined entirely by the following claims.